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From: Shaw, Hanh
Sent: Thur 10/30/2014 7:45:07 PM
Subject: Shell modeling report for Burger J exploration well

Earlier this week, I received a CD from Shell containing the Modeling Report for the Burger F well in the Chukchi Sea. The model simulates the dispersion and deposition of the D001 and D013 discharges from the drill ship Noble Discoverer pursuant to the following Chukchi exploration general permit provision at II.A.13.e.

Due to the size of the report, I have uploaded it to the AOO share drive, Oil and Gas Sector, Shell 2015 NOIs.

e. Modeling

1. Dilution, Plume and Deposition Modeling. Complete site-specific modeling analyses of dilution, plume extent and dispersion, and solids deposition to inform and optimize the sampling programs in the EMP Plan of Study. Prior to modeling analysis, conduct site-specific data collection or evaluate relevant historical data collected at the drill site to determine the range of conditions in the receiving water that affect fate and transport of pollutants (e.g., high and low measured currents, etc.). Model inputs must address facility-specific discharge flow rates and outfall configurations (e.g., outfall locations, outfall depths from surface, port size, port orientation, etc.). All modeling reports must be submitted to the Director along with the EMP Plan of Study (Section II.A.13.d.).

2. The modeling assessments must be conducted for the following:

i. turbidity/total suspended solids associated with Discharges 001 and 013 (water-based drilling fluids and drill cuttings; and muds, cuttings, cement at the seafloor);

ii. temperature associated with Discharge 009 (non-contact cooling water); and

iii. deposition characteristics (e.g., areal extent, thickness, quantities, etc.) of cuttings, sediments, solids, particulates, etc., associated with Discharges 001 and 013.